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Olga T. Yokoyama, Los Angeles, CA (USA)

50. Scrambling

Abstract

The article addresses the question of whether Slavic has Japanese-style scrambling, focusing on Russian and Serbo-Croatian. It is argued that these languages have Japanese-style scrambling in addition to topicalization and focalization. Several tests are provided that can be used to tease apart scrambling and topicalization/focalization.

It is uncontroversial that Slavic languages have topicalization and focalization. It is less clear whether they also have the scrambling operation of the kind found in languages like Japanese and Korean. The goal of this chapter is to address the issue of whether Slavic languages have Japanese-style scrambling in addition to topicalization/focalization. I will confine my attention to Russian and Serbo-Croatian, focusing on three properties of Japanese-style scrambling which differentiate it from topicalization/focalization, namely the undoing effect (i. e. semantic vacuity of long-distance scrambling), the impossibility of adjunct scrambling, and the absence of relativized minimality effects with scrambling.

However, a word of caution is first in order regarding the term *scrambling*, one of the most abused items in the generative syntax vocabulary. In the current literature, the term is often used for expository convenience when authors are not sure what kind of movement they are dealing with, or when they want to avoid committing themselves to the issue, or merely to indicate that the movement in question is different from other better known instances of movement regarding languages/phenomena considered. As a result, almost every well-studied language, including English, has been claimed to have scrambling. But this is not necessarily scrambling of the kind we find in Japanese. The ease of exposition use of the term scrambling raises a serious problem in crosslinguistic studies of scrambling. Because of it, we cannot simply rely on the term scrambling when comparing claims made regarding scrambling in different languages. It is necessary to conduct the relevant tests to make sure we are dealing with the same phenomenon. This task is taken on below.

Returning to the question of whether Russian and Serbo-Croatian have Japanese-style scrambling, as discussed by a number of authors, long-distance scrambling in Japanese is semantically vacuous (Saito 1992; Bošković and Takahashi 1998; Saito and Fukui 1998; Tada 1993), which has led the above-mentioned authors to conclude that Japanese long-distance scrambling is completely undone in Logical Form. Consider (1), involving long-distance scrambling of the embedded object *daremo-ni*. (I indicate positions where scrambled elements are interpreted with 'e'. Under Bošković and Takahashi's 1998 analysis, which base-generates scrambled elements in their SS position and then lowers them in Logical Form to positions where they are Case and θ-marked, this is the landing site of Logical Form lowering, while under the overt movement analysis of scrambling (see, e. g., Fukui 1993; Saito 1992; Saito and Fukui 1998), this is the launching site of overt movement. For uncontroversial overt movements, I will use 't(race)'.)

(1) *Daremo-ni dareka-ga* [*Mary-ga* e *atta* to] *omotteiru.*
everyone-DAT someone-NOM Mary-NOM met that thinks
'Everyone, someone thinks that Mary met.' (Bošković/Takahashi 1998)

Daremo-ni in (1) must have narrow scope, i. e. it cannot scope over the matrix clause subject. This fact illustrates semantic vacuity of long-distance scrambling Japanese. In this respect, Japanese-style scrambling clearly differs from topicalization and focalization, which do affect scope (see (5) below).

Another property of Japanese scrambling that differentiates it from topicalization/focalization concerns inability of adjuncts to undergo scrambling, illustrated by Saito's (1985) examples in (2). (I ignore quasi-argument adjuncts and short-distance scrambling of adjuncts, since in the latter case it is not clear if we are dealing with scrambling or base-generation even under the overt movement analysis of scrambling.)

(2) a. *Mary-ga* [*John-ga riyuu-mo naku sono setu-o*
Mary-NOM John-NOM reason-even without that theory-ACC
sinziteiru to] *omotteiru.*
believes that thinks
'Mary thinks that John believes in that theory without any reason'

b. **Riyuu-mo naku Mary-ga* [*John-ga* e *sono setu-o sinziteiru to*] *omotteiru.*

Before proceeding, notice that (1)−(2) receive a principled account under Bošković and Takahashi's (1998) analysis of scrambling: Under this analysis a scrambled element is base-generated in its surface position and then lowers in Logical Form to where it is Case- and θ-marked. *Daremo-ni* is thus base-generated in its SS position in (1). If it were to remain in its SS position in Logical Form the derivation would crash because it would not be Case- and θ-licensed. *Daremo-ni* therefore undergoes lowering in Logical Form to a position where it can receive Case and a θ-role. The movement is obligatory in the sense that if it does not take place, the derivation would crash. Since it necessarily lowers into the embedded clause, *daremo-ni* cannot scope over *dareka-ga*. As for the impossibility of adjunct scrambling, which is a mystery under the overt movement analysis of scrambling, under Bošković and Takahashi's analysis the adjunct

is base-generated in its SS-position in (2b) and must lower to the embedded clause in Logical Form to modify the embedded predicate. Note, however, that the adjunct is fully licensed in its SS position. In contrast to *daremo-ni* in (1), which has Case and θ-features that are not licensed in its SS position, the adjunct in (2b) possess neither a Case feature nor a θ-role that could drive its Logical Form movement. Since there is no reason for the adjunct to lower into the embedded clause in Logical Form Last Resort prevents it from moving.

Turning to Russian, Bailyn (2001) claims that Russian differs from Japanese with respect to the two tests conducted above regarding Japanese scrambling: the corresponding movement operation in Russian can affect scope and dislocate adjuncts, which should be interpreted as indicating that Russian does not have Japanese-style scrambling. The former claim is illustrated by (3), where the universal can take wide scope, and the latter claim by (4). (Note that Bailyn uses the data in question to argue against Bošković and Takahashi's analysis of Japanese-style scrambling, not offering an account of the contrast between Russian and Japanese. As discussed below, the Russian data in (3−4) are actually irrelevant since they do not involve scrambling.)

(3) *Každogo mal'čika kto-to xočet, čtoby Boris uvidel* e.
every boy someone wants that-SUBJ Boris saw
'Every boy, someone wants Boris to see.'

(4) *Ja bystro xoču, čtoby oni dopisali kursovye* e.
I quickly want that-SUBJ they wrote papers
'I want them to write their papers quickly.' (Bailyn 2001)

As noted above, the contrast between Japanese (1)−(2b) and Russian (3)−(4) seems to indicate that Russian does not have Japanese-style scrambling. In other words, the above differences between Japanese and Russian "scrambling" seem to lead to the conclusion that the two are actually different phenomena, brought together only by the unfortunate usage of the term scrambling. This interpretation is particularly natural in light of the fact that the undoing property, illustrated in (1), is in a number of works, including Bošković and Takahashi (1998; see also Fukui 1993; Saito and Fukui 1998; Saito 1992, 2000), taken to be the defining and the most interesting property of Japanese-style scrambling. If Russian does not have it, it would then follow that Russian does not have Japanese-style scrambling. However, there is reason to believe that Russian scrambling and Japanese-style scrambling are not as different as the above data would lead us to believe. In fact, (3)−(4), which provide evidence that Russian scrambling and Japanese-style scrambling are different phenomena, do not seem to involve scrambling at all.

As noted above, Bošković and Takahashi (1998), Fukui (1993), Saito and Fukui (1998), and Saito (1992, 2000) all take the undoing property to be the defining characteristic of Japanese-style scrambling. In deliming the nature of the phenomenon, these authors pay particular attention to differentiating Japanese-style scrambling and English-style topicalization, the main distinction between the two being the undoing property: since topicalization has semantic import, i. e. it establishes an operator-variable relation, it is not undone, in contrast to Japanese-style scrambling. Thus, in contrast

to the scrambled Noun Phrase in (3), the topicalized Noun Phrase in (5) can have wide scope.

(5) Everyone, someone thinks that Mary met.

A factor that interferes with the conclusion regarding Russian scrambling reached above based on (3)−(4) is that the language has topicalization as well as focalization (see, e. g., King 1993). Now, Japanese also has topicalization. However, topicalized elements in Japanese have a special topic marker, *wa*. Since *daremo-ni* in (1) is not *wa*-marked, it unambiguously undergoes scrambling; it could not have undergone topicalization. (As discussed in Saito (1985), *wa*-marked elements can also undergo scrambling, i. e. such elements can be either topicalized or undergo scrambling.) In contrast to Japanese, topicalization in Russian is not accompanied by special morphology. The same holds for focalization. (I am ignoring here the *li*-focus construction.) There is then no way to rule out the topicalization/focalization option for *každogo mal'čika* in (3). Consequently, the fact that the quantifier can take wide scope is not surprising: it patterns in the relevant respect with the topicalized quantifier in English (5). Due to the availability of the topicalization/focalization derivation, (3) thus does not tell us anything about the issue of whether Russian scrambling has the undoing property, i. e. whether Russian has Japanese-style scrambling. The adverb fronting example in (4) is also irrelevant: all the example tells us is that adverbs can be topicalized/focalized, which is well-known.

Could it then be that all the freedom of word order in Russian is a result of applications of topicalizing/focalizing movements, possibly coupled with some optionality regarding subject and object A-raising? The above data cannot answer the question. If dislocated elements in examples like (3) could undergo Japanese-style scrambling as well as topicalization/focalization, they should be able to do everything that scrambled phrases can do and everything that topicalized/focalized elements can do. Above, we have tapped the latter. What about the former? We can test the former with respect to locality, more precisely, relativized minimality (RM). (Note that when not committing myself to whether the Russian operation under consideration involves topicalization, focalization, or Japanese-style scrambling, I will simply refer to it as dislocation.) The relativized minimality data indicate that Russian has Japanese-style scrambling. Consider (6)−(9).

(6) a. **Kto*$_i$ *ty videl kogda* t$_i$ *pod'ezžal?*
who you saw when came

b. *?*Čto*$_i$ *vy videli kak zapakovali* t$_i$*?*
what you-PL saw how (they-)did-up (Müller/Sternefeld 1993)

(7) a. *Ty doktor*$_i$ *videl kogda* e$_i$ *pod'ezžal?*
you doctor saw when came
'Did you see when the doctor came?'

b. *Vy pocylku*$_i$ videli *kak zapakovali* e$_i$.
you-PL parcel-ACC saw how (they-)did-up
'You saw how they did up the parcel.'

(8) a. *?*Kakvu knjigu*$_i$ *Marko i Ivan znaju kada je Petar pročitao* t_i*?*
what book Marko and Ivan know when is Petar read
'What book do Marko and Ivan know when Peter read ?'

b. *Ovu knjigu*$_i$ *Marko i Ivan znaju kada je Petar pročitao* e_i.
this book Marko and Ivan know when is Petar read
'Marko and Ivan know when Peter read this book.' (Stjepanović 1999a)

(9) **That doctor*$_i$*, you wonder when Peter fired* t_i.

(6), which involves A'-movement across an A'-element, shows Russian wh-movement is subject to relativized minimality islands. Still, (7a−b) are acceptable. A parallel contrast is found in Serbo-Croatian, another Slavic language with a similar freedom of word order as Russian, as shown in (8). Given that, as indicated by English (9), topicalization is sensitive to relativized minimality (more precisely, wh-islands), (7) then should not involve topicalization on the derivation that yields a fully acceptable outcome. It is well-known that focalization is also subject to the Wh-Island Constraint crosslinguistically. (In fact, if Russian wh-fronting actually involves focus-movement, as argued in Bošković 2002, (6) illustrates sensitivity of focus movement to wh-islands.) The obvious conclusion, then, is that (7) involves scrambling. It is also worth noting here that Stjepanović (1999a) observes that (6) raises a serious problem for the overt movement analysis of scrambling. In particular, the derivation on which the wh-phrase undergoes overt scrambling out of the wh-island prior to wh-movement incorrectly rules in (6) given that scrambling is not subject to the Wh-Island constraint (see (7); see also Bošković 2004, 620 for an account of the contrast between (6) and (7) within the Bošković and Takahashi 1998 system).

Notice that, as Bošković and Takahashi's (1998) (10) shows, Japanese-style scrambling is also not sensitive to wh-islands. On the other hand, as in Russian and Serbo-Croatian, wh-movement in Japanese is sensitive to wh-islands, as (11), involving null operator movement, shows. (Kikuchi 1987 shows that comparative deletion in Japanese involves null operator movement.) Japanese thus patterns with Russian and Serbo-Croatian in the relevant respect.

(10) *Sono hon-o*$_i$ *John-ga* [*Mary-ga* e_i *yonda ka dooka*] *siritagatteiru*
that book-ACC John-NOM Mary-NOM read whether wants-to-know
'That book, John wants to know whether Mary read.'

(11) *?**[$_{CP}$*Op*$_i$ [*Bill-ga* [*Mary-ga* t_i *yonda ka dooka*] *siritagatteiru*] *yorimo*]
Bill-NOM Mary-NOM read whether wants-to-know than
John-wa takusan-no hon-o yonda.
John-TOP more-GEN book-ACC read
'John read more books than Bill wants to know whether Mary read.'

The data concerning relativized minimality in Russian are, however, conflicting. Another difference between topicalization and scrambling discussed by Bošković and Takahashi is that, as noted in Fukui (1993), Saito (2000), and Saito and Fukui (1998), multiple scrambling is possible, whereas multiple topicalization is not.

(12) **To John*$_j$*, that book*$_i$*, (Bill said that) Mary handed* t_i t_j.

(13) *Sono hon-o*$_i$ *John-ni*$_j$ *Bill-ga Mary-ga* e_j e_i *watasita to itta*
that book-ACC John-DAT Bill-NOM Mary-NOM handed that said
'That book, to John, Bill said that Mary handed.' (Bošković/Takahashi 1998)

According to Bailyn (2001), Russian disallows multiple dislocation, the most natural interpretation of which would be that Russian dislocation is always topicalization/focalization, i. e. that Russian does not have Japanese-style scrambling. My informants, however, find multiple dislocation examples like Bailyn's (slightly modified) (14) acceptable. Müller and Sternefeld (1993) and Müller (1995) also claim that such examples are acceptable based on (15). (Stjepanović 1999a observes that examples like (15) are also acceptable in Serbo-Croatian.) This is consistent with the conclusion that Russian has both topicalization/focalization and Japanese-style scrambling, as a result of which dislocated elements in Russian can do everything that both topicalized/focalized and scrambled elements can do. (It is of course possible that there is some speaker variation, speakers who reject multiple dislocation constructions not having Japanese-style scrambling.)

(14) *(*) On Saše*$_i$ *kasetu*$_j$ *xočet* [čtoby *Boris peredal* e_j e_i].
he Sasha-DAT cassette-ACC wants that-SUBJ Boris gave
'He wants Boris to give the cassette to Sasha.'

(15) a. *Čto ty*$_i$ *menja*$_j$ *vižu* [*čto* e_i *ljubiš'* e_j]
that-IND you-NOM me-ACC I-see that-IND love
'that I see that you love me.'

b. *Čto knigu*$_i$ *mne*$_j$ *Maksim dal* e_j e_i.
that-IND book-ACC me-DAT Maxim-NOM gave
'that Maxim gave me the book'

Note that Bošković and Takahashi (1998) use the insensitivity of scrambling to wh-islands and the possibility of multiple scrambling as an argument against the overt movement analysis of scrambling. On this analysis, long-distance scrambling is treated as overt A'-movement. We should then expect it to pattern with other overt A'-movement operations, like topicalization and wh-fronting, in that it should not be able to take place across an A'-element, as in the case of extraction out of wh-islands (9) and multiple application (12).

Notice also that in their discussion of islands, Bošković and Takahashi focus on relativized minimality islands, which can be considered well-understood in the current theoretical framework, thus can be used to tease apart different analyses of scrambling, and stay away from islands that due to their ill-understood nature cannot be used to tease them apart. (The Coordinate Structure Constraint is particularly controversial in this respect. In fact, it has been convincingly argued by Munn 1993 to be a constraint on interpretation rather than an instance of syntactic locality.) Moreover, empirically, it is not clear whether Russian scrambling is sensitive to non-relativized minimality islands. Bailyn (2001) argues that it is. However, Zemskaja (1973), Müller and Sternefeld (1993), Müller (1995), and Yadroff (1991) claim that Russian scrambling is not

sensitive to several non-relativized minimality islands that wh-movement is sensitive to (see also Stjepanović 1999a regarding Serbo-Croatian). As for Japanese, the empirical situation is also unclear. For relevant discussion the reader is referred to Bošković (2004). (I report that Japanese examples involving scrambling out of non-relativized minimality islands are judged to be better than examples involving wh-movement out of non-relativized minimality islands (as in the comparative construction), and that a bilingual speaker of Japanese and English I consulted found Japanese examples involving scrambling out of non-relativized minimality islands to be clearly better than the corresponding English examples involving topicalization out of such islands.)

Returning to the question of whether Russian has Japanese-style scrambling, another test that could help us answer the question concerns the undoing effect. Saito (1992) shows that, in contrast to topicalization and wh-movement, scrambling can take a wh-phrase outside its scope in overt syntax. Notice first that a wh-phrase in Japanese can be interpreted only if it is contained within a Complementizer Phrase headed by a +wh-complementizer (Q). Saito and Fukui (1998) refer to the constraint in question as the Wh-Q Constraint, and assume that it applies in Logical Form. (Given that Japanese interrogative clauses are marked with the question markers *ka*/*no*, the only +wh-complementizer in (16) is the embedded clause complementizer.)

(16) **Dare-ga* [*John-ga sono hon-o katta ka*] *siritagatteiru.*
who-NOM John-NOM that book-ACC bought Q wants-to-know
'Who wants to know [Q John bought that book].'

Before proceeding with the discussion of the undoing effect, notice that if *dare-ga* in (16) were to lower to the Specifier of *ka* in Logical Form the movement would have to leave a trace that could not be deleted since the trace is in the position of the variable. The derivation in question is then ruled out by the ban on Vacuous Quantification and the Proper Binding Condition. On the other hand, in the case of Bošković and Takahashi's scrambling lowering no condition of the grammar forces leaving a trace behind. Bošković and Takahashi therefore assume scrambling lowering does not leave a trace (alternatively, the trace can be deleted), which makes the Proper Binding Condition irrelevant. (In this respect, Bošković and Takahashi's analysis of scrambling is similar to May's 1977 quantifier lowering.) Note also that we have here an argument against positing a ban on lowering given that the ban would redundantly rule out the *dare-ga* lowering derivation for (16). In fact, as discussed by Bošković and Takahashi (1998), positing a condition specifically banning lowering would be vastly redundant given that almost all instances of lowering are ruled out independently.

Returning to the undoing effect of scrambling, what is relevant for our purposes is that (16) is ruled out because the wh-phrase, which is generated outside of the +wh Complementizer Phrase, is not contained within a +wh Complementizer Phrase at LF. Significantly, in (17), where the most embedded Complementizer Phrase containing a wh-phrase is scrambled to the matrix clause leaving the wh-phrase outside of the +wh Complementizer Phrase, the wh-phrase can still take scope in the intermediate +wh Complementizer Phrase. As observed by Saito (1992), constructions like (17) are not perfect. However, such constructions, in which scrambling removes a wh-phrase outside of its +wh Complementizer Phrase, are clearly better than (16), where a wh-phrase is base-generated in its θ-position outside of its +wh Complementizer Phrase.

(17) *?*[*Mary-ga nani-o katta to*]$_i$ *John-ga* [*Bill-ga* e$_i$ *itta ka*] *sitteiru.*
Mary-NOM what-ACC bought that John-NOM Bill-NOM said Q knows
'John knows what Bill said that Mary bought.' (Bošković/Takahashi 1998)

(18) shows that wh-movement and topicalization differ from scrambling in this respect. (18a) is marginal due to a wh-island violation. What is important for our purposes is that it cannot at all have the interpretation on which the first *who* takes embedded scope. The same holds for (18b), where topicalization of a phrase containing *who* places *who* outside of the only +wh Complementizer Phrase in the sentence (see Stjepanović 1999a for an analysis of cases where topicalization and wh-movement do reconstruct).

(18) a. *?*[*Which picture of who*]$_j$ *do you wonder who*$_i$ t$_i$ *bought* t$_j$*?*

b. *[*That Mary met who*]$_i$ *I know who*$_j$ t$_j$ *believes* t$_i$*?*

The fact that scrambling can take a wh-phrase outside its scope, in contrast to wh-movement and topicalization, provides further evidence for the undoing property of scrambling. Given that, in contrast to wh-movement and topicalization, scrambling can be, in fact must be (cf. (1)) undone, the wh-phrase is within its scope in (17) in Logical Form after the undoing of scrambling (i. e. after Logical Form lowering in the Bošković and Takahashi analysis) so that (17) does not violate the Wh-Q Constraint, in contrast to (16) and (18a−b) (on the relevant reading of (18a). Note that (18) shows that the Wh-Q Constraint is operative in English.)

This argument for the undoing property of scrambling is different from the one discussed with respect to (1) in that the scrambling derivation yields an acceptable sentence that is underivable under the topicalization/focalization derivation. Unfortunately, we cannot use the test in question to determine whether Russian has Japanese-style scrambling due to an interfering factor. Russian is a multiple wh-fronting language, which means that, a few exceptions noted in Bošković (2002) aside (one of them is discussed below), all wh-phrases in Russian must front and establish an operator-variable relation in overt syntax, the movement in question involving either focus or wh-movement (see Bošković 2002; Stepanov 1998). There is even a stronger requirement on Russian wh-phrases. Russian wh-phrases, including those that do not move to Specifier of Complementizer Phrases overtly, must be clause-mates in overt syntax with the +wh-complementizer heading the Complementizer Phrase where they are interpreted. Thus, as Stepanov (1998) observes, (19a−b) are unacceptable. (Note that, as discussed in Bošković 2002 and Stepanov 1998, although Russian wh-phrases must undergo A'-movement in overt syntax, which the wh-phrases in (19) do, they do not have to move to a Specifier of an interrogative Complementizer Phrase overtly. Note also that the English counterpart of (19a), given in the translation, is grammatical and that the subjunctive counterpart of (19a), *kto xočet čtoby kogo videl Petr* 'who wants Peter to see who', is not.)

(19) a. **Kto dumaet čto kogo videl Petr?*
who thinks that-IND whom saw Peter
'Who thinks that Peter saw whom?'

b. *?*Ivan i Marija dumajut čto kogo videl Petr?*
Ivan and Maria think that-IND whom saw Peter
'Who do Ivan and Maria think that Peter saw?'

Note also that (20) is unacceptable on the matrix reading of either of the embedded wh-phrases, i. e. it has to be interpreted as a multiple indirect question, in contrast to its English counterpart. (Given that Russian questions do not have to involve overt wh-movement, *kogda* can be lower than Specifier of the embedded Complementizer Phrase. As discussed in Bošković 2002 and Pesetsky 1989, D-linked wh-phrases are exceptional in that they do not have to move overtly. Note, however, that D-linked and non-D-linked wh-phrases behave in the same way with respect to (19)−(20), apart from the irrelevant fact that D-linked wh-phrases do not have to front.)

(20) *Kto znaet kogda ty videl kakogo doktora.*
who knows when you saw which doctor

The clause mate requirement interferes with conducting Saito's test regarding the undoing property of scrambling in Russian. However, the test can be conducted in Serbo-Croatian. Although Serbo-Croatian is a multiple wh-fronting language like Russian (which means that non D-linked wh-phrases in Serbo-Croatian undergo either wh-movement or focus movement overtly, see Bošković 2002 and Stjepanović 1999b), its wh-phrases are not subject to the clause-mate requirement. Citing the results of Saito's test in Serbo-Croatian, Stjepanović (1999a) argues that Serbo-Croatian has Japanese-style scrambling. Consider (21)−(22).

(21) *Ko kaže da je koga pitao šta je ona uradila?*
who says that is whom asked what is she done
'Who says that he asked whom what she did?'

(22) *?*[*Koliko novca potrošiti*]$_i$ *Marko zna ko želi* e$_i$.
how-much money to-spend Marko knows who wants
'Marko knows who wants to spend how much money.' (Stjepanović 1999a)

(21) contains two interrogative Complementizer Phrases, the matrix and the most embedded one. Nonetheless, *koga* must take matrix scope, the embedded clause reading being completely unavailable (i. e. (21) can only be a multiple direct question, not a multiple indirect question).The reason for this is that the interrogative clause within which *koga* is contained in (21) is the matrix one, not the embedded one. The fact that *koga* cannot be interpreted in the most embedded Complementizer Phrase indicates that the Wh-Q Constraint is operative in Serbo-Croatian. Turning to (22), notice that clausal fronting in (22) takes the wh-phrase outside of the scope of the embedded question. Stjepanović observes that the wh-phrase can still be interpreted in the Specifier of the embedded Complementizer Phrase, i. e. (22) can be interpreted as a multiple indirect question. In fact, it can be interpreted in the same way as (23) in this respect. (Note that although (22) is not perfect, it is much better than (21) on the multiple indirect question reading.) The contrast in question thus parallels the contrast between Japanese (16) and (17). (Notice that speakers differ regarding the Russian counterpart

of (22), *Skol'ko deneg potratit Ivan znaet kto xočet*, some of them accepting it on the relevant reading. I attribute this to a variation in the exact formulation of the clause-mate requirement, which interferes with conducting Saito's test in Russian.)

(23) *Marko zna ko želi koliko novca potrošiti.*

Clausal dislocation in (22) thus patterns with Japanese-style scrambling rather than topicalization in that it can take a wh-phrase outside of its scope. Stjepanović therefore concludes that clausal dislocation in (22) involves Japanese-style scrambling: like Japanese-style scrambling, it does not create an operator-variable relation and it is undone in Logical Form. After the clause is moved to its θ-position in Logical Form, the wh-phrase in (22) is within its scope, just like the wh-phrase in (23). The Wh-Q Constraint is therefore not violated in (22).

I conclude therefore that Slavic has Japanese-style scrambling. Russian (3−4), which appeared to argue against this conclusion, are not problematic for it because they do not involve scrambling on the relevant derivations.

It is worth noting in this respect that it is much more difficult to show that scrambling not only can be, but also must be undone for Slavic than for Japanese due to the availability of the topicalization/focalization option (as discussed in Stjepanović 1999b, Serbo-Croatian also has topicalization and focalization). Recall that (1) provides evidence that Japanese-style scrambling must be undone. The interfering factor with the corresponding Russian data in (3) is the availability of the topicalization/focalization derivation, on which the fronted quantifier can take wide scope.

Although, as shown above, Slavic has Japanese-style scrambling there are some differences between Russian (more generally, Slavic) scrambling and Japanese-style scrambling. E.g., it is well-known that elements undergoing short-distance scrambling in Japanese can bind anaphors. However, such elements cannot bind anaphors in Russian. (The topicalization/focalization derivation is irrelevant here, since topicalized/focalized elements cannot serve as A-binders.).

(24) [*Mary to Pam*]$_i$-*ni* [*otagai*$_i$-*no hahaoya]-ga* e$_i$ *atta.*
Mary and Pam-DAT each other-GEN mother-NOM met
'Mary and Pam, each other's mothers met.'

(25) *[*Larisu i Tanju*$_i$ [*materi drug druga*$_i$] *vstretili* e$_i$.
Larisa-ACC and Tanja-ACC mothers-NOM each-other-GEN met
'Larisa and Tanja, each other's mothers met.'

For an account of this difference between Russian and Japanese, the reader is referred to Bošković and Takahashi (1998). Under Bošković and Takahashi's analysis, short-distance scrambled elements (in fact, only short-distance scrambled elements) can stay in their base-generated Surface Structure position in Logical Form in Japanese, but not in Russian, which gives us a straightforward account of the contrast between (24) and (25) (the difference between Russian and Japanese is tied to a difference between the two languages regarding the availability of the multiple subject construction, Japanese, but not Russian, allowing it).

Another difference between Russian and Japanese scrambling concerns scope. While a short-distance scrambled element in Japanese can take either wide or narrow

scope with respect to elements that c-command its θ-position, it is often assumed that in Russian, the scrambled element must take wide scope in this configuration. Thus, the object in (26) must take wide scope. However, this is not the case in (27), which is ambiguous. ((27) is more natural with *každogo čeloveka* regardless of the reading. Also see Ionin 2003 for discussion of scope in Russian and Stjepanović 1999a for relevant discussion of Serbo-Croatian.)

(26) *Každogo*$_i$ *kto-to ljubit* e_i.
everyone-ACC someone-NOM loves
'Everyone, someone loves.'

(27) *Každogo (čeloveka)*$_i$ *dva studenta ljubjat* e_i
everyone person-ACC two students-NOM love
'Everyone/every person, two students love.'

(27) is well-behaved: the topicalization/focalization option must be responsible for wide scope of the object given that the scrambling option can only yield narrow scope. (Recall that even short-distance scrambling must be undone in Russian, in contrast to Japanese, as (24−25) show.) On the other hand, the lack of ambiguity in (26) is puzzling. I leave it unresolved, merely noting that if for some reason focalization were the only option for the dislocated quantifier in (26), the example's lack of ambiguity could be explained given that, as is well-known, focus facilitates wide scope.

In conclusion, Slavic languages considered here have scrambling in addition to topicalization and focalization. This means that examples like Serbo-Croatian (28) are three way ambiguous regarding fronting of the embedded clause object: the fronting could involve topicalization, focalization, or scrambling. Above, I have presented several tests that can tease apart scrambling and topicalization/focalization.

(28) *Ivana*$_i$ *tvrdiš da ona voli* e_i.
Ivan-ACC you-claim that she loves
'You claim that she loves Ivan.'

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Željko Bošković, Connecticut, Storrs, CT (USA)

51. Clitics in Slavic

Abstract

Clitics are words which lack word-level prosodic struture, hence must attach to another prosodic word in order to be pronounced. This topic is important and very popular for